

Montana

Comprehensive Assessment

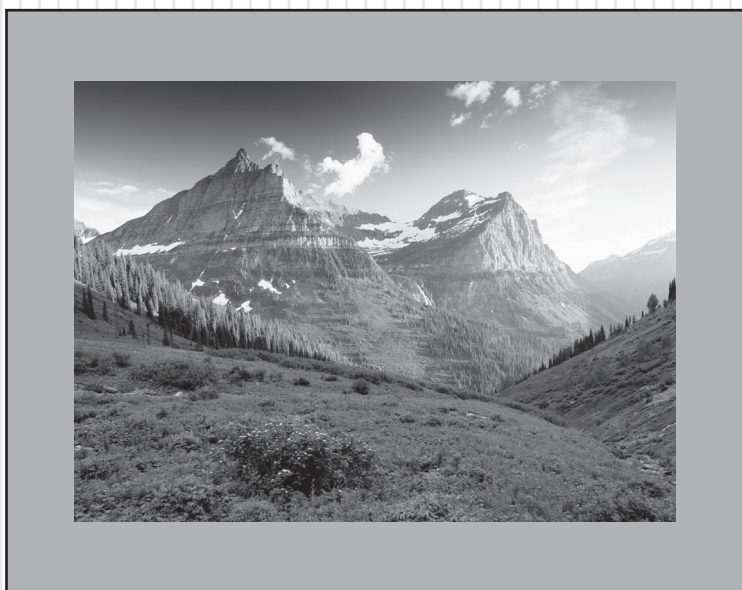
System (MontCAS, Phase 2 CRT)

Student Name:

School Name:

Teacher/Class:

GRADE 7
COMMON RELEASED ITEMS
SPRING 2007



OPI

OFFICE OF PUBLIC INSTRUCTION

General Directions

This test contains six sessions: three in reading and three in mathematics. The sessions are made up of multiple-choice questions and questions for which you must show your work or write out your answers. Write your answers to all of the questions in your Student Response Booklet. For the reading parts of the test, read each selection before answering the questions.

For each multiple-choice question, choose the best answer. Fill in the bubble in your Student Response Booklet that corresponds to your answer choice for that question.

Some questions ask you to show your work or to write out your answers. Write your answers to these questions in the spaces provided in your Student Response Booklet. Your answers must fit in the spaces provided. Any part of an answer outside the box might not be scored.

Be sure to answer all parts of each question, and to answer completely. For example, if a question asks you to explain your reasoning or show your work, be sure to do so. You can receive points for a partially correct answer, so try to answer every question.

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Reading Session 1

This test session includes reading selections, multiple-choice questions, and a question for which you must write out your answer. After you read each selection, answer the questions about it in the spaces provided in your Student Response Booklet. You may not use a dictionary or any other reference tool during this session.

In this passage, a minstrel sings a song to a proud king. Read the passage and then answer the questions that follow.

The King of Sedo

A Tale of the Wolof Tribe

Harold Courlander

In the town of Sedo, it is said, there was a King named Sabar. Sabar's armies were powerful. They conquered many towns, and many people paid tribute to him. If a neighboring Chief passed through Sedo, he came to Sabar's house, touched his forehead to the ground, and presented gifts to the King. As the King grew old, he grew proud. His word was law in Sedo. And if his word was heard in other places, it was law there too. Sabar said to himself, "I am indeed great, for who is there to contradict me? And who is my master?"

There came to Sedo one day a minstrel, and he was called on to entertain the King. He sang a

song of praise to Sabar and to Sabar's ancestors. He danced. And then he sang:

*"The dog is great among dogs,
Yet he serves man.
The woman is great among women,
Yet she waits upon her children.
The hunter is great among hunters,
Yet he serves the village.
Minstrels are great among minstrels,
Yet they sing for the King and his slaves."*



When the song was finished, Sabar said to the minstrel, “What is the meaning of this song?”

The minstrel replied, “The meaning is that all men serve, whatever their station.”

And Sabar said to him, “Not all men. The King of Sedo does not serve. It is others who serve him.”

The minstrel was silent, and Sabar asked, “Is this not the truth?”

The minstrel answered, “Who am I to say the King of Sedo speaks what is not true?”

At this moment a wandering holy man came through the crowd and asked for some food. The minstrel said to the King, “Allow me to give this unfortunate man a little of the food which you have not eaten.”

Sabar said, “Give it, and let us get on with the discussion.”

The minstrel said, “Here is my harp until I have finished feeding him.” He placed his harp in the King’s hands, took a little food from the King’s bowl, and gave it to the holy man. Then he came back and stood before Sabar.

“O King of Sedo,” he said, “you have spoken what I could not say, for who contradicts a king? You have said that all men serve the King of Sedo and that he does not serve. Yet you have given a wandering holy man food from your bowl, and you have held the harp for a mere minstrel while he served another. How then can one say a king does not serve? It is said, ‘The head and the body must serve each other.’”

And the minstrel picked up the harp from the hands of the King and sang:

*“The soldier is great among soldiers,
Yet he serves the clan.
The King is great among kings,
Yet he serves his people.”*

Mark your answers to questions 1 through 5 in the section marked “Reading—Session 1” in your Student Response Booklet.

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1. In the first paragraph, the word <u>contradict</u> means</p> <ul style="list-style-type: none">A. respect.B. oppose.C. replace.D. serve. | <p>2. What is the main way Sabar assures himself of his greatness?</p> <ul style="list-style-type: none">A. by fighting as a member of his own armyB. by making people obey and serve himC. by forbidding important leaders to visit himD. by requiring minstrels to sing songs of praise to him |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



3. What is the **main** purpose of the minstrel's song?

- A. to make a fool of the King
- B. to amuse the King
- C. to give the King a riddle
- D. to help the King be a better leader

4. In this passage, the King serves because he

- A. is convinced to do so.
- B. grows tired of being asked.
- C. is tricked into doing so.
- D. concludes that it is best.

5. Most tales like "The King of Sedo"

- A. describe actual people.
- B. contain a wise king.
- C. take place in an imaginary country.
- D. contain a lesson to be learned.



Degus are rodents that can make wonderful pets. Read this passage about degus and then answer the questions that follow.

Degu

Alvin Silverstein

DO YOU KNOW WHAT a degu is? If you don't, you're not alone. Most people have never heard of them. Degus have recently been introduced to the pet industry, but many pet stores do not sell them because so little is known about them. People who do keep degus say that they are wonderful pets—interesting, lovable, and fun to play with. Pet owners also say that degus are a great addition to the fast-growing exotic pet industry.

A DEGU'S LIFE

2 Degus are very sociable animals. In the wild, they live in large groups or colonies that may include ten to hundreds of animals. Males will fight to defend their home territories. They dig burrows with very complex, extensive tunnels and several entrances. They collect dirt, twigs, rocks, and other things lying around and pile them up in mounds near the burrow entrances.

Degus have a well-defined social structure within their groups. Each male's social status is based on the size of the mound outside the entrance to his burrow. The high-ranking degus have the highest mounds. If a mound is accidentally destroyed, however, the owner will lose his high-ranking status.

Degus live in very close-knit families. They are very affectionate to one another and may spend some time resting close together and nuzzling each other's fur. The males also help in raising the young.

DEGUS AS PETS

Degus love attention and companionship. In fact, most breeders suggest buying at least two degus if pet owners cannot spend enough time with their pet. Degus are not solitary animals; a lonely

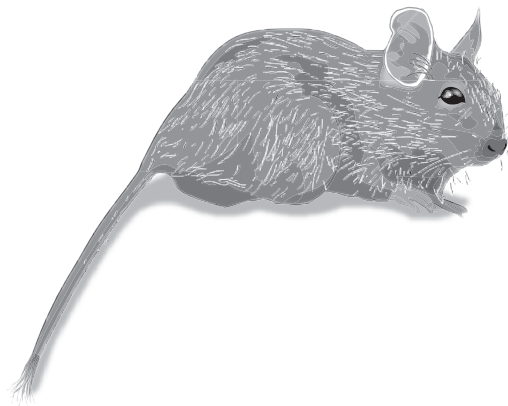
degu may become depressed and ill and may even die. It is best to get degus when they are young. Degus that are raised from a young age and are handled often will be much friendlier than older degus that are not familiar with people.

Degus have good memories. They can recognize sounds and voices. They know their owners and are friendlier to people they know. When degus meet strangers, they will be very cautious. They are not aggressive by nature and will rarely bite a person or another degu, unless they are threatened.

Degus sleep at night and are most active during the early morning and evening. Degus are very lively animals and like to run and jump and climb. They are curious and love to explore. Of course, as rodents, they tend to chew a lot. So they need a large, escape-proof cage, plenty of exercise, and "safe" things to chew on.

Like chinchillas, degus also need to take dust baths to keep their fur healthy.

In the wild, degus have a life span of up to 15 years. But in captivity, they rarely live more than 10 years. Their lives are often shortened by a poor diet or a lack of exercise or companionship. Degus that are given plenty of love and proper care can bring a lot of enjoyment to pet owners.



Mark your answers to questions 6 through 10 in the section marked "Reading—Session 1" in your Student Response Booklet.

6. Why does the author **most likely** begin the passage with a question?
- A. to help define the word "degu"
 - B. to compare degus with other types of animals
 - C. to bring attention to an uncommon pet
 - D. to convince people to own pets
7. In paragraph 2, the word extensive means
- A. short.
 - B. vast.
 - C. shallow.
 - D. tight.
8. What determines the social status of a male degu?
- A. the size of the entrance to his burrow
 - B. the extent to which he can defend his family
 - C. the height of the mound outside his burrow
 - D. the amount of food he is able to collect
9. How is the information in this passage **mainly** organized?
- A. by giving opinions about degus
 - B. by providing facts about degus
 - C. by describing problems in caring for degus
 - D. by listing steps about how to care for degus
10. Which new title would **best** fit this passage?
- A. "Training Degus"
 - B. "An Uncommon Animal"
 - C. "Rodents and Mammals"
 - D. "Degu Behavior in the Wild"



Jacob Savino learns an important lesson one winter day. Read this story about Jacob, and then answer the questions that follow.

Savino's Landscaping

Carol Hammond

Jacob had mowed lawns, raked leaves, and shoveled snow in his neighborhood since he was thirteen. He knew the landscape of the backyards that made up the area like he knew the back of his hand: Mrs. Delano's weed-infested gardens, Mr. Della Valle's shady, wooded back lot, and Mrs. Tucci's fearsome front steps, upon which even Jacob had slipped once or twice during a big winter storm.

Today was a cold January Saturday, and Jacob was bundled in a gray parka and waterproof gloves. On the left chest pocket of his parka, his mother had stitched a patch that read "Savino's Landscaping" in curly black letters. He had a price list, a business card, and a list of clients two pages long, but operating a business wasn't all Jacob thought it would be. He had shoveled Mrs. Tucci's front steps and long walkway and driveway for almost a year without ever seeing one cent from her. She never even said thank you.

Jacob stopped in front of Mrs. Tucci's big, dark house and took a deep breath as he looked at the layers of ice and snow that had fallen on the front yard during the night. He let the smaller shovel fall to his side and the larger shovel slide into position on the walkway. He began to scrape and lift the snow until he could see the brick underneath.

4 I don't know why I should be shoveling for her when she won't even pay me, Jacob thought as he worked his way up the walk. His father told him he didn't have a choice because if he didn't shovel for her, he'd have to hand over the money he *did* get from the rest of his customers that day. But why should Jacob be punished for doing what any good businessperson would do? Did his father think the corner store owner would let Jacob and his friends play video games without putting in quarters? What made his father think it was different for Savino's Landscaping?

As Jacob mulled this over, he heard what sounded like a kitten's cry. When he looked up, he realized it was Mrs. Tucci, who was now sitting, one leg out straight and the other bent at the knee, on the second-to-the-last stair of her front steps. Her eyes were milky blue and her skin a papery, soft cream.

6 "Mrs. Tucci," Jacob said, "Are you all right?" She nodded. "I'm a silly old duff, aren't I?" she said. "I was coming out to get the mail," she said, pointing a bony finger toward the mailbox at the end of her driveway.

"I'll get it for you," Jacob said and ran to the mailbox. He pulled the three letters from inside and made his way back to her on the step, slipping a little along the way.

"It's sure a slick one today," she said and started to pull herself up. She looked back over her shoulder as she started inside. "Aren't you going to come in for some cocoa?"

Jacob didn't reply. She'd never invited him in before and now she was acting as if they were old friends. "I have a lot of shoveling to do today, Mrs. Tucci," he said, but she didn't look away.

11 She made a shushing sound with her mouth and batted her hand at the air. "A day without laughter is a wasted day," she said. "Come on in. Have some hot cocoa. Take a rest."

Inside, she took his coat and hung it on a pair of hooks. He looked down at the tiny puddles of melted snow and muck from his boots, but she batted her hand at the air again and said, "Who cares."

In the kitchen she told him to sit at the table, and while she made cocoa she hummed a tune.

"Jacob," Mrs. Tucci said, "I've been quite sick for awhile. I haven't been able to get out much, but I must say that when I do go out, it is always such a nice surprise to see that you've shoveled



my walk.” She smiled and cocked her head. “You always do such a nice job.”

Jacob sat, cheeks hot with embarrassment, holding his cocoa in his lap. Just minutes before he had felt bitter about Mrs. Tucci not paying him, practically leaving ice on her walk to spite her. Now, she was telling him what a good job he did. He could barely look at her.

“I’ve been saving up to give you something,” she said and stood up to reach for a can. She **16** pulled off the lid and fished something out. Jacob could see it was money—a small, folded wad of dollar bills.

“No, no, Mrs. Tucci,” he said, standing up quickly. “I couldn’t take that.” He couldn’t believe what he was saying. By all rights he’d earned the money, and he could see it wasn’t even close to the amount owed to him. Still, the feeling inside

that made him gently push her hand away was so strong he couldn’t deny it. She’d probably been saving that money for months in a coffee can on her kitchen shelf, he thought, all while he was arguing with his father about how to run a business. His father had told him, over and over, that Jacob needed to see there was more to what he did for his neighbors than just making money.

“Oh but you must take it, Jacob. It’s yours,” said Mrs. Tucci in a faint voice.

“That’s all right,” he said, pushing his chair back in. “I don’t need it.” And as he watched her tuck the bills back into her coffee can, he knew he really meant it.

Back outside the sun was shining, and the snow and ice on Mrs. Tucci’s steps and walk were melting in the strong rays. Today would be a good day for Savino’s Landscaping. Jacob was sure of it.

Mark your answers to questions 11 through 21 in the section marked “Reading—Session 1” in your Student Response Booklet.

11. How does Jacob feel when he first arrives at Mrs. Tucci’s house?

- A. determined
- B. resentful
- C. exhausted
- D. bored

12. According to paragraph 4, Jacob’s father feels that Mrs. Tucci

- A. will likely never speak to Jacob.
- B. should be charged like his other customers.
- C. deserves to be treated with patience.
- D. does not owe as much as Jacob thinks.



13. Why does Jacob ignore Mrs. Tucci's first invitation to come inside?
- A. He does not hear what she says.
 - B. He is trying to be rude to her.
 - C. He has too much work to do.
 - D. He is confused by her friendliness.
14. The dialogue in paragraphs 6 through 11 **mostly** shows
- A. the history between Jacob and Mrs. Tucci.
 - B. how difficult Mrs. Tucci can be.
 - C. why Jacob tries not to talk to Mrs. Tucci.
 - D. the development of a relationship between Mrs. Tucci and Jacob.
15. Jacob is embarrassed when Mrs. Tucci compliments him on his work because he
- A. has never before received praise from her.
 - B. knows that he has worked very hard.
 - C. is ashamed that he complained about her.
 - D. knows that he has been overcharging her.
16. In paragraph 16, the word fished means
- A. found.
 - B. pulled.
 - C. figured.
 - D. poured.
17. Jacob refuses Mrs. Tucci's money because he
- A. knows he did not earn the money.
 - B. realizes that she cannot afford to pay him.
 - C. feels insulted that she offers him so little.
 - D. prefers to collect the full amount in the spring.
18. What did the author **most likely** mean by the statement at the end of the story, "Today would be a good day for Savino's Landscaping"?
- A. Jacob feels a new sense of what it means to work for neighbors.
 - B. Mrs. Tucci is Jacob's last customer for the day.
 - C. Jacob feels better knowing that he will no longer work for free.
 - D. The melting snow and ice will make Jacob's work easier.



19. What advice will Jacob **most likely** give to someone who wants to start a neighborhood landscaping business?
- A. Refuse to accept payment from senior citizens.
 - B. Never complain when customers fail to pay.
 - C. Remember that there is more to business than making money.
 - D. Always take a moment to laugh and relax over hot cocoa.

20. The **main** conflict in this story is between
- A. Jacob and his inner feelings.
 - B. Mrs. Tucci and her front steps.
 - C. Jacob and his father.
 - D. Mrs. Tucci and her illness.

21. This story is an example of
- A. a folktale.
 - B. a biography.
 - C. historical fiction.
 - D. realistic fiction.



Write your answer to question 22 in the space provided for it in your Student Response Booklet.

22. Describe how Jacob changed from the beginning of the story to the end. Use specific details from the story to support your answer.

Reading Session 2

This test session includes reading selections and multiple-choice questions. After you read each selection, answer the questions about it in the spaces provided in your Student Response Booklet. You may not use a dictionary or any other reference tool during this session.

This article describes an exciting discovery made in Wyoming almost one hundred years ago. Scientists are still finding fossil remains of dinosaurs in the West. Read the article and then answer the questions that follow.

The Dinosaur Mummy

Gary Raham

In 1908 Charles H. Sternberg and his three sons hunted big game in Wyoming. They were not worried that their prey, a three-horned dinosaur called *Triceratops*, had been dead for more than sixty-five million years. Long-dead dinosaurs made perfect prey for these experienced fossil hunters.

After searching all summer, they found their prize in August. But an unexpected discovery was even more exciting: the fossilized remains of a mummified dinosaur. Charles described it as “the crowning specimen of my life work!” . . .

The Sternbergs discovered a *Triceratops* skull near Schneider Creek and prepared it for shipment to the British Museum of Natural History. By then they were low on food and supplies. They were also sixty-five miles from Lusk, the nearest town.

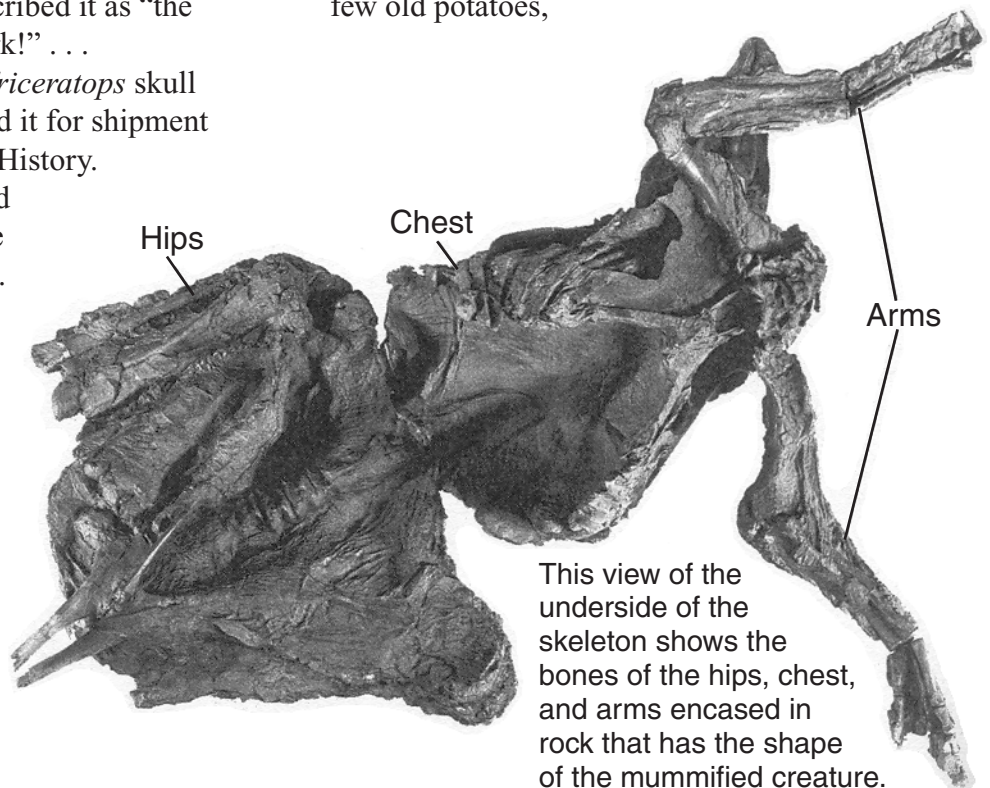
Charles and one of his sons, Charlie, got the horse and wagon hitched and ready to take the skull to Lusk. As they prepared to leave, another son, George, found some interesting bones sticking out of a high ridge of sandstone.

They didn’t want to risk not finding the site again or not having time to excavate the bones before the end of the summer. Charles suggested that George and Levi, who was fourteen, stay

and start uncovering the new bones. Meanwhile, Charles and Charlie would take the skull into town and bring back food.

George and Levi began removing the tons of rock that had protected the remains of the giant dinosaur for so long. The work was hot and exhausting.

After a few days, they didn’t even have enough flour to make bread or biscuits. They did have a few old potatoes,



which they boiled and ate a little at a time. The excitement of seeing the dinosaur emerge from the rock kept them going.

By the end of three days, they had uncovered the animal to its breastbone. The dinosaur lay on its back with its ribs and legs sticking up.

George carefully lifted a huge piece of sandstone off the chest and stared at the fossil in wonder. “I realized that here, for the first time, a skeleton of a dinosaur had been discovered wrapped in its own skin,” he wrote later.

10 The dinosaur had died in a protected place, untouched by predators. Its body had then dried out and become a natural mummy. Scientists think that a flash flood later carried it to its final resting place and quickly covered it with mud and sand. Over the millennia, water-borne minerals fossilized the bones and replaced the dried flesh with rock, creating a fossil in the exact shape of the mummy. . . .

A fine fossil it was. The skeleton was almost complete. Only the rear feet and tail had eroded away. The rock imprint of the skin showed that

the creature was not scaly, as many scientists had guessed. Instead, it was covered with bumps, which are called tubercles. Long tendons in the neck had bent the head back under the body in a “death pose” that is typical for dinosaurs. The front legs had three large hooves on each foot.

The Sternbergs later found another example nearby of the same kind of dinosaur, a species of duck-billed plant eater that is now called *Edmontosaurus annectens*. Fossilized pine needles, bark, and pinecones discovered near its stomach may be the remains of its last meal.

The first of the Sternbergs’ “mummified” specimens of *Edmontosaurus* is still on display at the American Museum of Natural History in New York City. Charles Sternberg hunted fossils for many more years. His sons continued for years after that. But none of them ever found another skeleton that so clearly showed what dinosaurs may have looked like and how they lived more than sixty-five million years ago.

Mark your answers to questions 23 through 27 in the section marked “Reading—Session 2” in your Student Response Booklet.

23. The **main** reason the photograph of the skeleton is included with the article is to
- A. prove how big the dinosaur was.
 - B. show where the dinosaur was discovered.
 - C. show which parts of the dinosaur remained.
 - D. compare the dinosaur to other dinosaurs.

24. For something to become a mummy it must be
- A. dried out in a protected place.
 - B. replaced with rock.
 - C. covered with bark.
 - D. carried in a flood and preserved.



25. According to paragraph 10, a fossil is

- A. an unexpected discovery.
- B. a weapon used to hunt.
- C. an imprint in a rock.
- D. a dinosaur.

26. The dinosaur mummy was an especially interesting discovery because it

- A. showed how the dinosaur's skin looked.
- B. showed how the mummy was made.
- C. was the oldest of its kind.
- D. was the largest of its kind.

27. The author wrote this article **mainly** to

- A. teach readers how to hunt fossils.
- B. interest readers in the life of Charles Sternberg.
- C. inform readers about a special discovery.
- D. show readers how mummies are made.



Many children are afraid of the dark. In this poem, the speaker describes how she overcame that fear. Read the poem and then answer the questions that follow.

The Woods Are Not Dark



You need not fear the woods
at night, our father said.
If you look, you'll see,
each aspen's a candle of light,
5 moon filtering
like water through fingers.

We were afraid—my sister and I—
city-bred, our eyes blinded,
by the winking high-wattage sea.

10 But my father remembered
the ancients' way.
Taking us each by a hand,
he led us to the inky edge of the woods.

We saw the silver-skinned
15 aspen bark, moon-glyphed and bear-clawed.
We heard the echoing finger-stops
of ebony on silver—
the winged, owl-like notes
of a Navajo flute.

20 Our father held our tiny
fluttering
hands tightly in his big rough ones
—like nestling chickadees.

He showed us the way.
25 And we have not forgotten,
from that day to this—
the woods at night
are never dark,
but always filled with light!

—Ruth Obee



Mark your answers to questions 28 through 32 in the section marked “Reading—Session 2” in your Student Response Booklet.

28. The first verse ends with the lines: “moon filtering/like water through fingers.” This image is an example of
- A. simile.
 - B. alliteration.
 - C. exaggeration.
 - D. onomatopoeia.
29. Lines 25 and 26 **most likely** mean that the effect of the experience
- A. was felt immediately afterward.
 - B. lasted for a long time, perhaps even years.
 - C. remained with the children for a short time.
 - D. would be passed on to other children.
30. Which word **best** describes the father?
- A. fearful
 - B. stern
 - C. timid
 - D. wise
31. The poet **most likely** wrote this poem to
- A. warn about the dangers of the woods.
 - B. compare two things that are similar.
 - C. describe a childhood experience.
 - D. show that the forest is different at night.
32. To which sense does the language in this poem appeal **most**?
- A. hearing
 - B. sight
 - C. smell
 - D. touch

Reading Session 3

This test session includes reading selections, multiple-choice questions, and a question for which you must write out your answer. After you read each selection, answer the questions about it in the spaces provided in your Student Response Booklet. You may not use a dictionary or any other reference tool during this session.

Read this poem about a memorable childhood experience and then answer the questions that follow.

A Poem for Carol (May She Always Wear Red Ribbons)

Students read a passage titled “A Poem for Carol” and then answered questions that followed. Due to copyright restrictions, the passage cannot be released to the public over the Internet. For more information, see the copyright citation below.

“A Poem for Carol” from *My House* by Nikki Giovanni. Published by William Morrow & Co., Inc. Copyright © 1972 by Nikki Giovanni.



Mark your answers to questions 46 through 50 in the section marked “Reading—Session 3” in your Student Response Booklet.

46. In line 6, the word offensive means
- A. ugly.
 - B. clogged.
 - C. obvious.
 - D. unpleasant.
47. In line 15, the word *him* appears in italic print to show that
- A. the speaker recognized the cat.
 - B. the father disliked the cat.
 - C. there was more than one cat.
 - D. the father attempted to ignore the cat.
48. In lines 19 through 22, the speaker **mostly** feels
- A. surprised to see the kitten.
 - B. afraid to approach the kitten.
 - C. sad because she cannot help the kitten.
 - D. disappointed she cannot keep the kitten.
49. What does this poem suggest about the speaker?
- A. She has a somewhat vague memory of the cat.
 - B. She is relieved that she never gave the cat a name.
 - C. She remembers the cat with warmth and sadness.
 - D. She regrets letting her sister be responsible for the cat.
50. To find this poem in an anthology (a collection of poems), the **best** place to look would be in the
- A. table of contents.
 - B. section headings.
 - C. acknowledgments.
 - D. copyright information.



Polystyrene foam is an easy and fun material with which to make creative projects. Read this passage about how to make a stamp using polystyrene foam and then answer the questions that follow.

Stamping with Polystyrene Foam

Heather Smith and Joe Rhatigan

Poly what? Polystyrene foam. You know, the stuff used to make carryout food boxes, coffee cups, and packing trays for meat and produce. It can't be recycled in most communities, so we've come up with a great fun way to keep it out of the trash. The soft material is easy to carve and is perfect for printing and stamping. Use an entire tray as a printing block, or cut a container into smaller pieces to use as stamps.

What You Need

Polystyrene foam tray (for a printing block)

Marker

Pencil or pen

Paint

Wide paintbrush or brayer

Paper

Glass jar

*Polystyrene foam carryout container
(for stamps)*

Scissors (for stamps)

*Small square pieces of cardboard (for
stamps)*

Glue (for stamps)

Several bottle caps (for stamps)

What You Do

1. Clean the tray with hot, soapy water and dry it with a towel.
2. To make a printing block, set the tray upside down on a table. Draw your design on the tray with a marker, then use a pencil or pen to carve the image into the tray. The design can be as simple or complicated as you like. Note: If there's a raised imprint or code on the tray, it'll show up in the design.
3. Use the wide paintbrush or brayer (like the one shown in photo 2) to spread a thin layer of paint over the design on your tray.

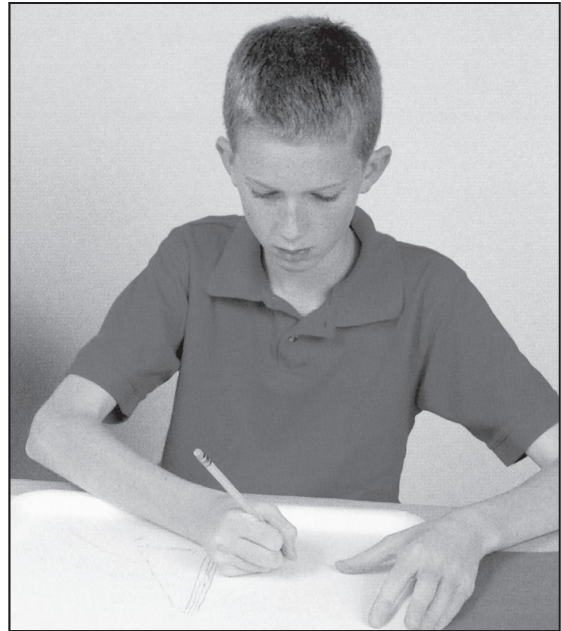


photo 1



photo 2



4. Carefully and evenly lay a piece of paper over the design on the tray. Roll the glass jar over the paper, or rub the surface with your hand, to transfer the design.

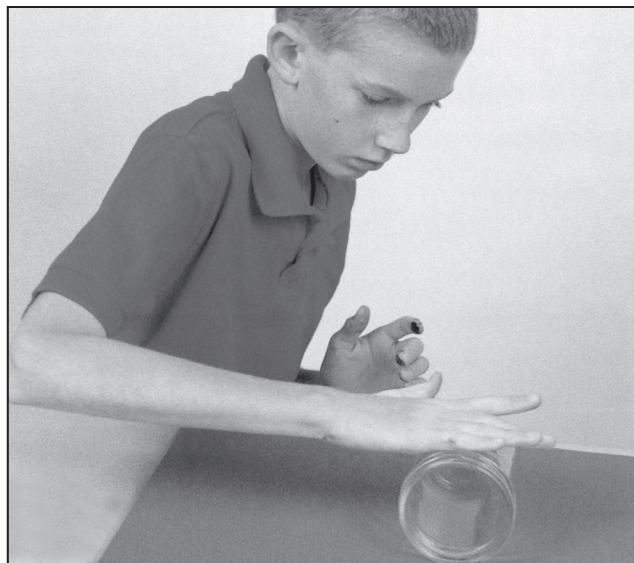


photo 3



photo 4

5. Slowly peel back a corner of the paper to see if the printing worked. If it looks good, go ahead and peel the rest of the paper off. If the design isn't clear, press the corner of the paper back down and roll the jar over the paper a few more times before lifting the paper again.

6. Make individual stamps by cutting designs from a larger piece of polystyrene, then glue cardboard to the backs of the designs. Make handles for the stamps by gluing bottle caps, facedown, to the cardboard pieces. Press each stamp into a tray of paint, and stamp it on a scrap piece of paper until the design shows up clearly. You're now ready to stamp away.

Mark your answers to questions 51 through 55 in the section marked "Reading—Session 3" in your Student Response Booklet.

51. One of the items needed for the project is a brayer. Based on the instructions and photos, a brayer is a
- A. small roller.
 - B. wide paintbrush.
 - C. piece of foam.
 - D. painted design.

52. Which photo shows how to transfer the design?
- A. photo 1
 - B. photo 2
 - C. photo 3
 - D. photo 4



53. Which step explains how to check the progress of the design?

- A. step 2
- B. step 3
- C. step 4
- D. step 5

54. The steps for this project are presented **mostly**

- A. by cause and effect.
- B. in chronological order.
- C. by compare and contrast.
- D. in order of difficulty.

55. This project is from a book about arts and crafts. The titles of other projects in the book are **most likely** included

- A. on the copyright page.
- B. in the table of contents.
- C. on the list of materials.
- D. in the glossary of terms.



Read this passage about how maps have changed over the years and then answer the questions that follow.

Here Be Dragons

Natalie M. Rosinsky

An old story from Norway says that the explorer Floki used ravens to find the distant land of Iceland. Floki sailed in an open boat, without a map. After many days at sea, Floki freed one bird at a time from the cage. The first bird flew back the way Floki had come. He knew *that* wasn't the way to Iceland. Finally, some of the birds flew off ahead of the ship. Floki followed them and found Iceland.

Most early mapmakers did not have such a “bird’s-eye view” of faraway places. How did they find out the location and shape of distant lands? They had to depend on what they could see for themselves as well as what explorers and travelers reported. Perhaps a traveler wrote that a distant city lay at the spot where a great river flowed into the sea. Sailors might tell of three islands off the coast or a wide bay near the cliffs. The early mapmakers recorded this information on their maps.

Unusual rocks, trees, and rivers became important landmarks on the earliest maps. To ancient Greek sailors, for example, mountains called the “Pillars of Hercules” marked the end of the known world. (Today we call this spot the Straits of Gibraltar.) Towns or lighthouses could also be landmarks.

Mapmakers judged the distance between places by the amount of time that travelers said they had spent on their journeys. They figured out how long it took to travel by horse or on foot. They multiplied the distance a ship could sail in a day by the number of days the trip took.

5 Early mapmakers used the sun and the stars to find the location of a faraway place. Was it in the east, where the sun rises? Or in the west where the sun sets? Sailors also knew a lot about the winds. In their stories of discovery, they might tell of winds that blew from the north, pushing the ships toward an island in the south. They wrote of winds from the east that brought them to a distant shore.

Explorers sailed farther and farther to trade for rare spices, discover riches, or claim land for

their own countries. And they brought back new information to mapmakers. People knew more about the world, but maps of distant places still contained mistakes. Judging distance was one problem.

For example, Columbus believed the world was much smaller than it is. He thought he had sailed all the way to Asia in 1492. He landed on a Caribbean island, carrying a letter to the “Great Khan” of China!

Mistakes in distance were just one kind of error on old maps. Some mapmakers were misled by travelers into showing a land bridge between southern Africa and southeastern Asia. Others drew the Americas as one continent. Some maps showed distant places as explorers hoped to find them—for example, North America with a northwest sea passage clear to China.

Travelers also exaggerated the creatures and people they had seen in distant places. Whales became “sea monsters,” while unusual lizards and snakes became “dragons.” Mapmakers decorated their maps with these fantastic creatures. Some mapmakers even believed that headless people or people with one gigantic foot used as an umbrella lived in faraway places!

Then, as now, people feared the unknown. Who or what was hiding beyond the known world? What monsters lay beyond the mountains or at the edge of the sea? Perhaps there were dragons! Early mapmakers often placed dragons and sea monsters at the edges of their maps, on unexplored land and seas.

11 In the 1700s, a new invention, the hot-air balloon, gave people their first true “bird’s-eye view” of a place. By 1858, a French photographer floated high in the sky with that recent invention, a camera. He took photographs of land miles away. These were combined into the first aerial map.

Today, with the help of airplanes and satellites, mapmakers can map every corner of the Earth. They have filled in the large, mysterious spaces once known only to “sea monsters” and “dragons.”



Mark your answers to questions 56 through 66 in the section marked “Reading—Session 3” in your Student Response Booklet.

56. In the first paragraph, what does the author imply about the ravens when Floki sets them free?
- A. The birds were trained as guides.
 - B. The birds just wanted to go home.
 - C. The birds could tell Floki where to find food.
 - D. The birds sensed the way to the closest land.
57. Early mapmakers determined distance by
- A. measuring how far and fast birds flew.
 - B. relying on the placement of the sun and stars.
 - C. multiplying the amount of time a trip took by how fast a ship could sail.
 - D. subtracting the amount of time a trip took from how big they thought the world was.
58. According to the passage, what is one problem early mapmakers faced?
- A. They had to rely on explorers’ claims to make their maps.
 - B. They knew nobody was interested in using their maps.
 - C. They wanted to be the ones who traveled.
 - D. They were afraid of sea monsters and dragons.
59. Which statement **best** summarizes paragraph 5?
- A. Travelers’ stories aided mapmakers.
 - B. Natural forces aided mapmakers.
 - C. New discoveries aided mapmakers.
 - D. Knowledge of winds aided mapmakers.
60. What contributed to Columbus landing on a Caribbean island rather than China?
- A. Without modern equipment, explorers had a hard time judging distance.
 - B. Winds from the east brought the explorers to different shores.
 - C. Inaccurate maps showed North America with a sea passage to China.
 - D. Some maps showed a land bridge between southern Africa and southeastern Asia.
61. What did mapmakers use to represent the unknown?
- A. the sun and stars
 - B. headless people and giants
 - C. dragons and monsters
 - D. rocks and trees



62. How did the hot-air balloon help make accurate maps?
- A. Sailors could no longer exaggerate about sea monsters.
 - B. Mapmakers could finally see the land from above.
 - C. Mapmakers stopped using rivers as landmarks.
 - D. Sailors could travel farther than they had in the past.
63. In paragraph 11, what does the word aerial mean?
- A. accurate
 - B. modern
 - C. from the air
 - D. from the land
64. What is the **main** purpose of this passage?
- A. to explain where early maps came from
 - B. to explain why today's maps are helpful
 - C. to explain how Columbus found the Caribbean
 - D. to explain the difficulties early mapmakers faced
65. The **best** source to find another word for mapmakers would be
- A. a dictionary.
 - B. an encyclopedia.
 - C. an Internet search engine.
 - D. a thesaurus.
66. Which new title would **best** fit this passage?
- A. "Maps of the Past"
 - B. "Floki and His Ravens"
 - C. "The Pillars at the End of the World"
 - D. "Modern Mapmaking Miracles"

Write your answer to question 67 in the space provided for it in your Student Response Booklet.

67. Summarize the main points of this passage. Use details from the passage to support your answer.

Mathematics

Session 1 (Calculator)

This test session includes multiple-choice questions and a question for which you must show your work or write out your answer. You may use a calculator during this session.

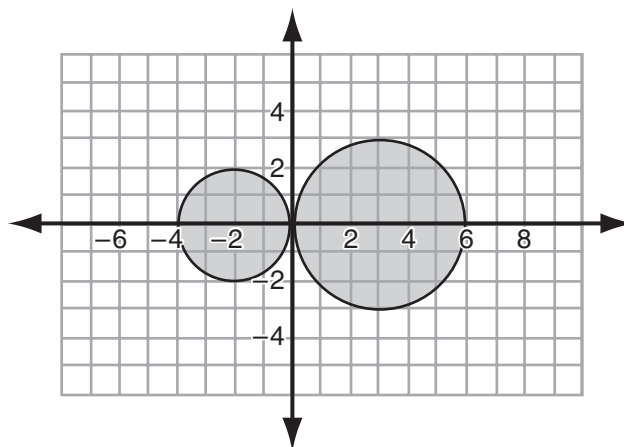
Mark your answers to questions 1 through 24 in the section marked "Mathematics—Session 1 (Calculator)" in your Student Response Booklet.

Use the table below to answer question 1.

A	B
2	8
4	14
6	20
8	26

1. What is the rule for changing the numbers in column **A** to the numbers in column **B**?
- A. Add 6.
 - B. Multiply by 4.
 - C. Multiply by 3 and then add 2.
 - D. Multiply by 4 and then subtract 2.

2. The shaded region on the grid below shows the area that underwater explorers have explored while looking for sunken treasure.



Which point on the grid have they **not** explored?

- A. $(1, -2)$
- B. $(-1, 2)$
- C. $(2, -1)$
- D. $(-2, 1)$



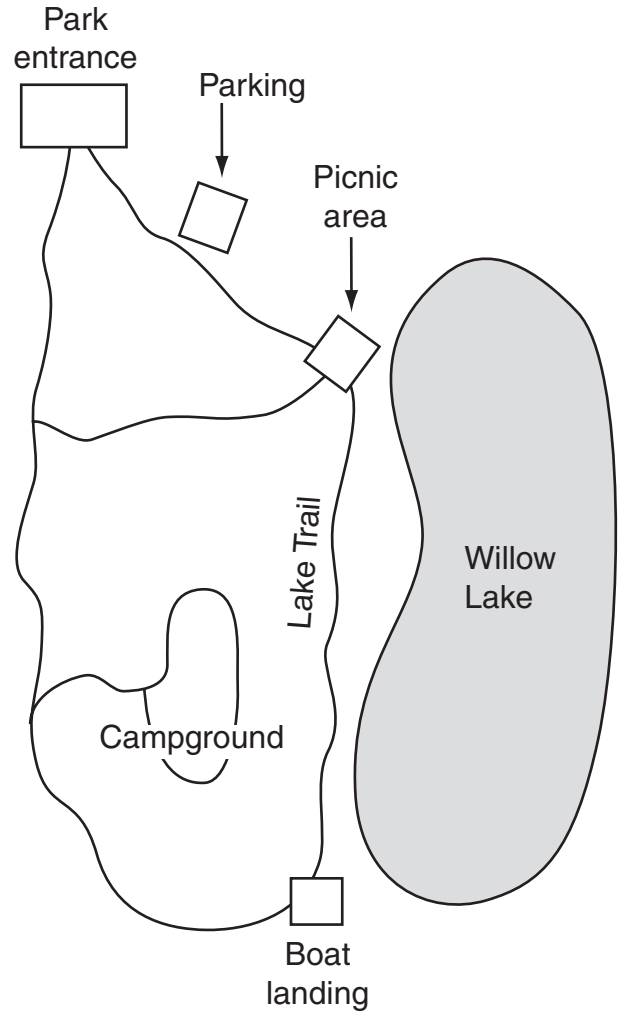
3. State police use this equation to calculate the stopping distance in feet, d , of a car traveling s miles per hour.

$$d = (s + s^2) \div 20$$

A man in an accident claims that he had been traveling 30 miles per hour just before the accident occurred. If he is correct, what would have been his stopping distance?

- A. 31.5 feet
B. 46.5 feet
C. 60 feet
D. 135 feet
4. The school board is surveying teachers about their use of computers in the classroom. Which question would be the **least** helpful for the school board to ask when deciding whether to approve the purchase of new computers?
- A. Which software program did the students like the most?
B. Is the computer a valuable tool in student learning?
C. About how many hours per week were computers used in the classroom?
D. What are the disadvantages of using computers in the classroom?

Use your ruler and the map below to answer question 5.



5. On this map, $\frac{1}{2}$ inch represents one-fourth of a mile. Which is the **best** estimate of the distance from the picnic area to the boat landing along Lake Trail?
- A. 0.625 mile
B. 1.25 miles
C. 1.875 miles
D. 2.5 miles

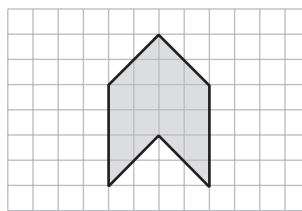


6. What is the value of this expression?

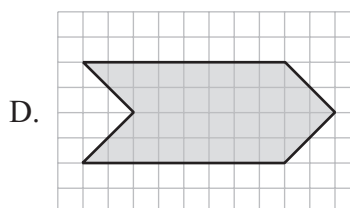
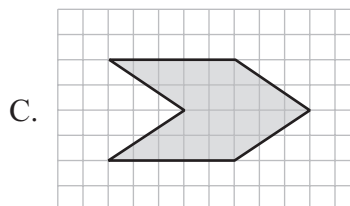
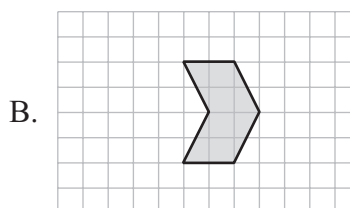
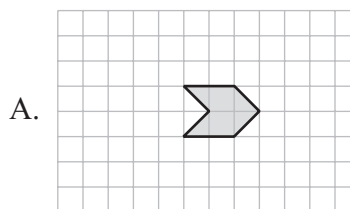
$$3 \times 6 - 4 + 8 \div 2$$

- A. 7
B. 10
C. 11
D. 18
7. Denise finished four crossword puzzles. She finished her first puzzle in 21 minutes, her second in 25 minutes, her third in 17 minutes, and her fourth in 25 minutes. What was Denise's average (mean) time to complete a crossword puzzle?
- A. 18 minutes
B. 22 minutes
C. 23 minutes
D. 25 minutes
8. A horse show travels across the country. In each city, 25 free horse show tickets are donated to a local charity. All other tickets are sold for \$10 each. What expression represents the amount of money, m , that is collected when t tickets are available for the show?
- A. $m = t - 25$
B. $m = 15t$
C. $m = 10t - 25$
D. $m = 10(t - 25)$

9. Adam drew the shape below.



Which shape is similar to the one that Adam drew?



10. Alexis and Gordon each completed a 20-mile bike race. Alexis averaged 8 miles per hour during the race, while Gordon averaged 12 miles per hour. How many more minutes did it take Alexis to finish the race than it took Gordon?

- A. 40 minutes
- B. 50 minutes
- C. 80 minutes
- D. 90 minutes

11. Maria uses 0.45 m of string for each toy she makes. She has 36 m of string. How many toys can she make?

- A. 16 toys
- B. 17 toys
- C. 80 toys
- D. 81 toys

12. The table below shows the monthly profit of a sport shoe company during the first eight months after launching a new advertising campaign.

Sport Shoe Company Profits

Month	Profit (in thousands)
January	183
February	195
March	208
April	226
May	246
June	268
July	295
August	327

If the trend continues, which amount is the **best** prediction of the company's profits in September?

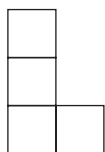
- A. \$350,000
- B. \$365,000
- C. \$385,000
- D. \$400,000

13. In Mr. Kendel's class, 12 of the 30 students are boys. Half of those boys play on the boys' basketball team. What percent of Mr. Kendel's students play on the boys' basketball team?

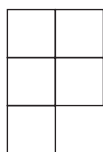
- A. 6%
- B. 12%
- C. 20%
- D. 50%



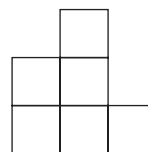
14. The figures below show the front, top, and right-side views of a three-dimensional structure that was constructed out of stacked cubes.



Front

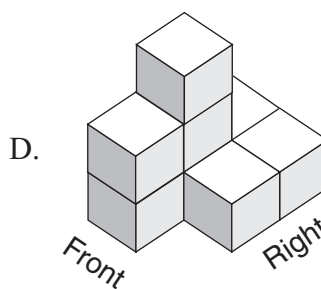
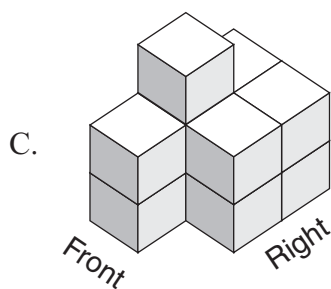
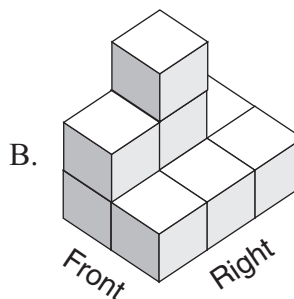
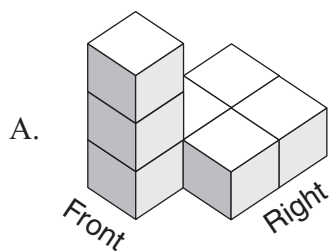


Top



Right

Which three-dimensional structure presents these views?



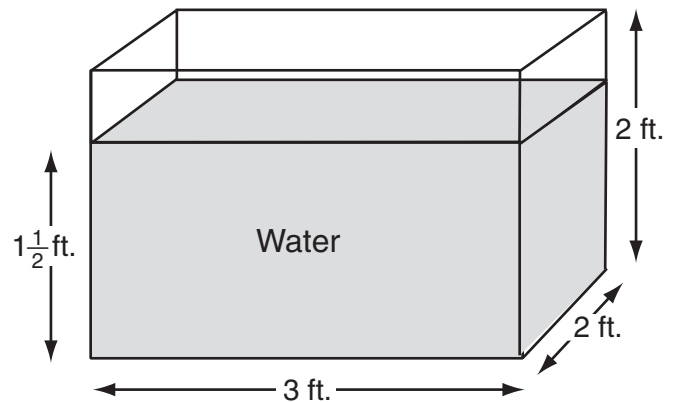
15. To estimate how many miles away a thunderstorm is, count the number of seconds between the sound of thunder and the next flash of lightning and divide the seconds by 5. Which equation shows the relationship between the seconds, s , and the miles, m , from a thunderstorm?

- A. $m = \frac{s}{5}$
- B. $m = \frac{5}{s}$
- C. $s = \frac{m}{5}$
- D. $s = \frac{5}{m}$

16. Angie is buying materials for a decorative wreath she will make by winding green ivy around a circular frame. The directions say that for every inch of circumference, 8 inches of ivy will be needed. If Angie's wreath has a diameter of 20 inches, what is the **least** amount of ivy she will need to complete the wreath?

- A. 252 inches
- B. 503 inches
- C. 1006 inches
- D. 2516 inches

17. Jerry poured water to a height of $1\frac{1}{2}$ feet in a new aquarium with dimensions shown below.

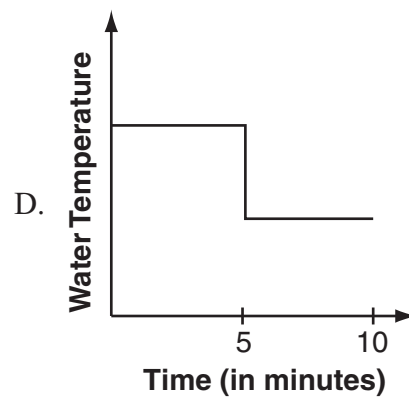
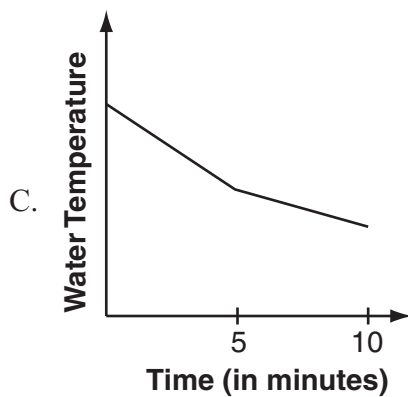
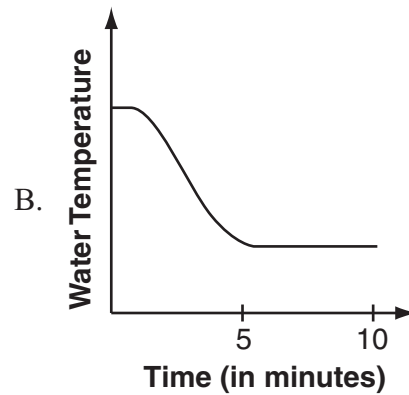
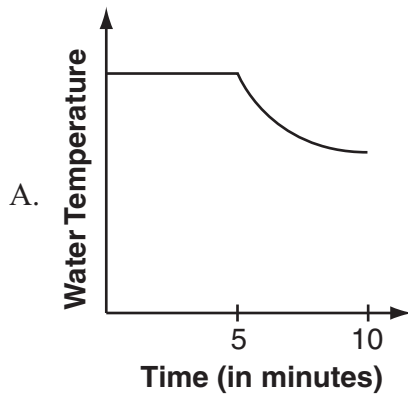


One cubic foot of water weighs approximately 62 pounds. What is the weight of the water Jerry put in the aquarium?

- A. 403 pounds
- B. 465 pounds
- C. 558 pounds
- D. 744 pounds



18. As part of a class activity, Emily placed a thermometer in a cup of water at room temperature. After five minutes, she added ice cubes to the water. Which graph **best** represents the temperature readings from Emily's thermometer during the first ten minutes of the activity?



19. Two out of every three students at Central Junior High are on an athletic team. There are 300 students on athletic teams at the school. How many students go to Central Junior High?

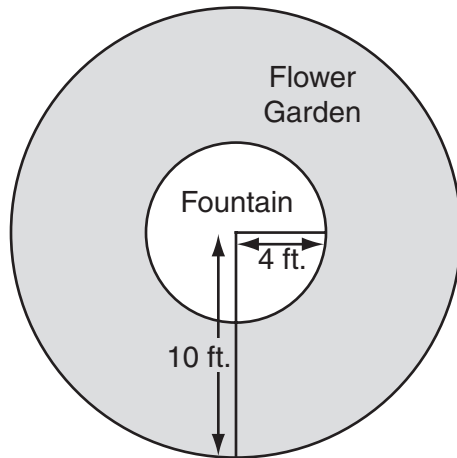
A. 200 students
B. 450 students
C. 600 students
D. 900 students

20. Which property is true for all squares but **not** true for all rhombuses?

A. All of their angles are equal.
B. All of their sides are equal.
C. Their opposite sides are parallel.
D. Their opposite sides are equal.



21. A circular flower garden surrounds a fountain as shown in the diagram below.



What is the approximate area of the flower garden?

- A. 19 square feet
- B. 38 square feet
- C. 133 square feet
- D. 264 square feet

22. Four friends perform experiments.

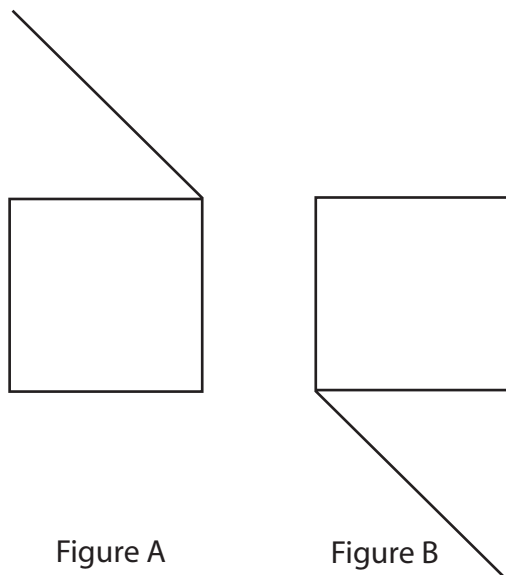
- Karen tosses a fair coin.
- Marie rolls a number cube that has the numbers 1 through 6 on its sides.
- Lucas pulls one card from a hat that contains 26 cards with a different letter of the alphabet written on each card.
- Sam pulls a marble from a bag that contains 4 black marbles and 5 red marbles.

Which event is **most likely** to occur?

- A. Karen tosses a "head."
- B. Marie rolls a number less than 5.
- C. Lucas pulls a card with a vowel written on it.
- D. Sam pulls a black marble.



23. Figure B is the image of Figure A after a transformation.



What is the transformation that was used to create Figure B?

- A. reflection
- B. rotation
- C. symmetry
- D. translation

24. Julie measured the growth of a bean plant each Saturday for five weeks. Her results are displayed in the table below.

Julie's Bean Plant

Week	Height
1	14 cm
2	18 cm
3	26 cm
4	29 cm
5	32 cm

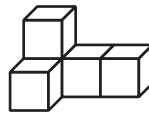
Which type of graph would be **most** appropriate to display Julie's results?

- A. a line graph
- B. a circle graph
- C. a histogram
- D. a stem-and-leaf graph



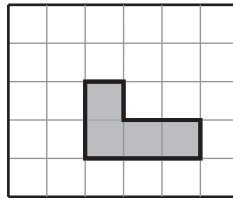
Write your answer to question 25 in the space provided for it in your Student Response Booklet. Show all of your work.

25. Martin built the structure shown below with five cubes.



Front

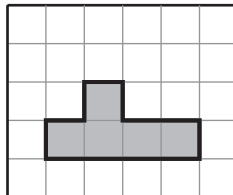
The front view of his structure is shown below.



Martin's Front View

- a. On the grid in your Student Response Booklet, draw the top view of Martin's five-cube structure. Label your drawing part a.

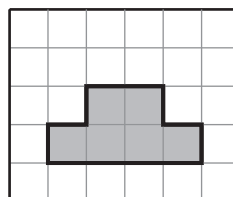
Linda built a different structure with six cubes. The front view of her structure is shown below.



Linda's Front View

- b. On the grid in your Student Response Booklet, draw one possible top view of Linda's six-cube structure. Label your drawing part b.
- c. On the grid in your Student Response Booklet, draw the view from the right or left side of the six-cube structure. Label your drawing part c.

James thinks this could be a top view of Linda's structure.



James's Top View

- d. Explain why James's top view is not possible for Linda's six-cube structure.

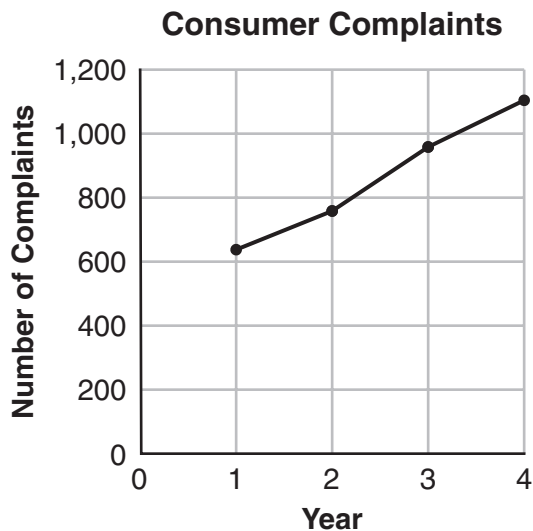
Mathematics

Session 2A (Calculator)

This test session includes multiple-choice questions. You may use a calculator during this session.

Mark your answers to questions 26 through 30 in the section marked "Mathematics—Session 2A (Calculator)" in your Student Response Booklet.

26. The graph below shows the number of consumer complaints for an airline. The airline has been in business for four years.



Which statement about the data in the graph is the most accurate?

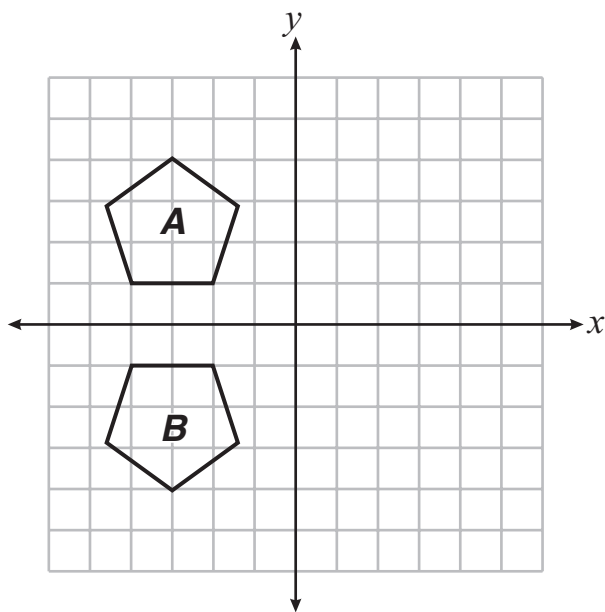
- A. Consumer complaints doubled the second year.
- B. Consumer complaints for this airline are above the industry average.
- C. Consumer complaints are increasing steadily.
- D. Consumer complaints increase some years and decrease some years.

27. The city council wants to conduct a survey to find out if a new gas station is needed. The council members want to be sure to get fair survey results. Who should they survey?

- A. morning bus drivers
- B. ten people from each neighborhood
- C. owners of three or more cars
- D. owners of subcompact cars

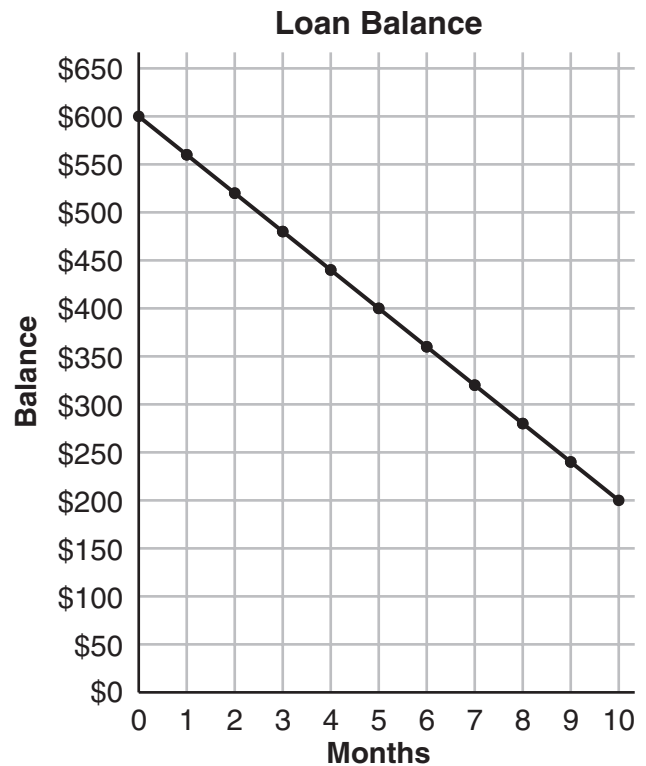


Use the diagram below to answer question 28.



28. For which transformation is figure *B* the image of figure *A*?
- reflection over the *x*-axis
 - reflection over the *y*-axis
 - 180° counterclockwise rotation with its center at the origin
 - 90° clockwise rotation with its center at the origin
29. Sandra is driving to Easton, which is 285 miles from her home. She drove 171 miles in the first 3 hours. If she continues at the same speed, how much longer will it take her to get to Easton?
- 1 hour, 12 minutes
 - 1 hour, 20 minutes
 - 2 hours
 - 5 hours

30. Pat got a loan of \$600 to buy a washing machine. The graph shows the balance (the amount he owes on the loan) when he makes monthly payments.



Which equation shows the balance, *b*, after *m* monthly payments?

- $b = 40m$
- $b = 600$
- $b = 600 - m$
- $b = 600 - 40m$

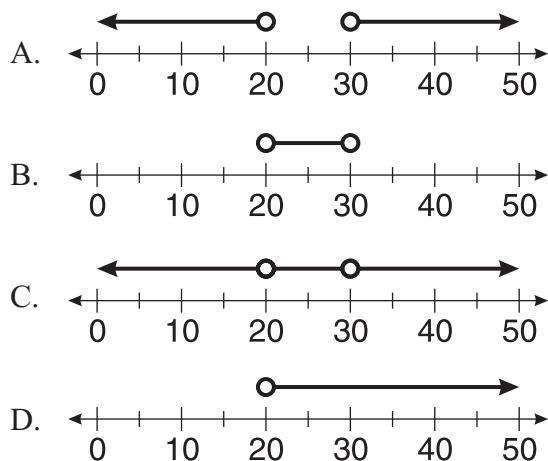
Mathematics

Session 2B (No Calculator)

This test session includes multiple-choice questions. You may NOT use a calculator during this session.

Mark your answers to questions 35 through 38 in the section marked "Mathematics—Session 2B (No Calculator)" in your Student Response Booklet.

35. The volleyball team members want to buy the coach a gift. The amount of money they spend, s , must satisfy two limits: $s > 20$ and $s < 30$. Which graph shows how much they can spend?

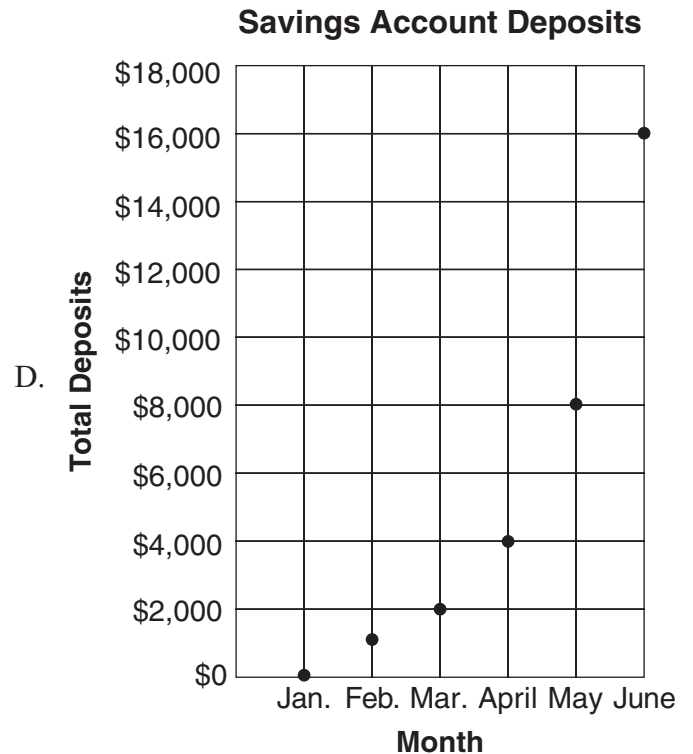
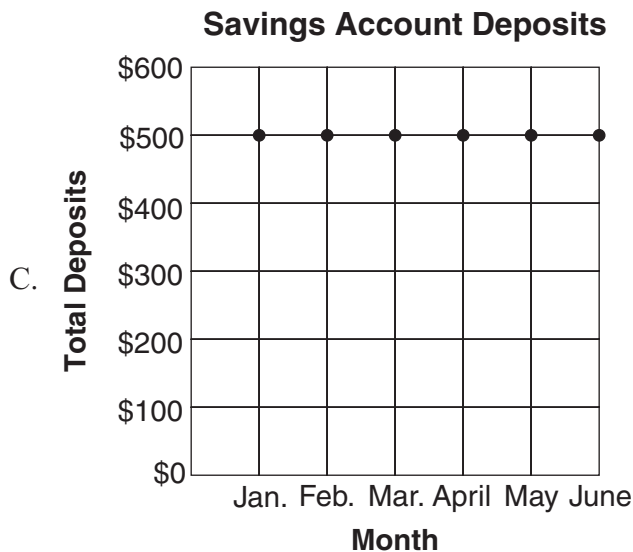
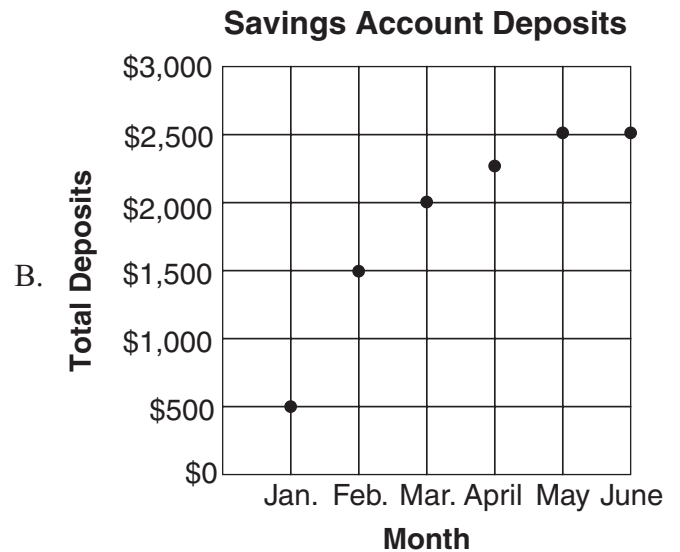
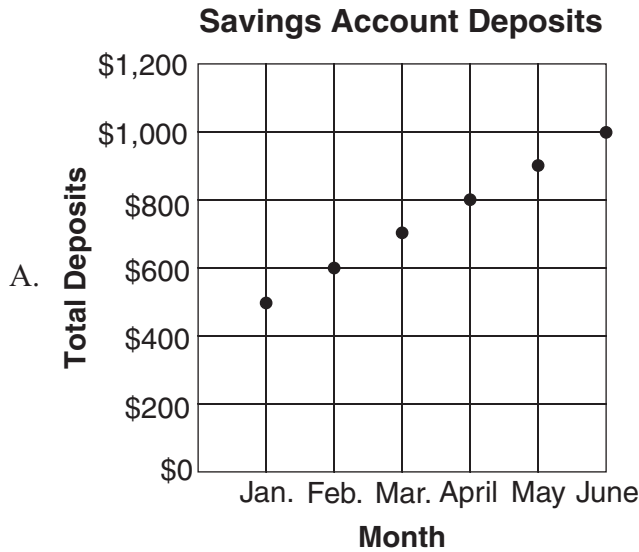


36. Samantha is drawing a triangle. So far she has drawn two angles that each measure 60 degrees. Which kind of triangle will Samantha have when she is finished?

- A. right
- B. scalene
- C. obtuse
- D. equilateral



37. In January, Ella started a savings account with a \$500 deposit from a gift she received from her aunt. Each month after that, she made equal deposits of money she earned from an after-school job. She made a graph to show how much money she deposited altogether. Which graph shows Ella's record of deposits?



38. Jason used 6.2 gallons of gas to drive 178 miles. Which of the following is the best estimate for Jason's mileage rate in miles per gallon?
- A. 20 miles per gallon
 - B. 25 miles per gallon
 - C. 30 miles per gallon
 - D. 35 miles per gallon

39. Item not scored

Mathematics

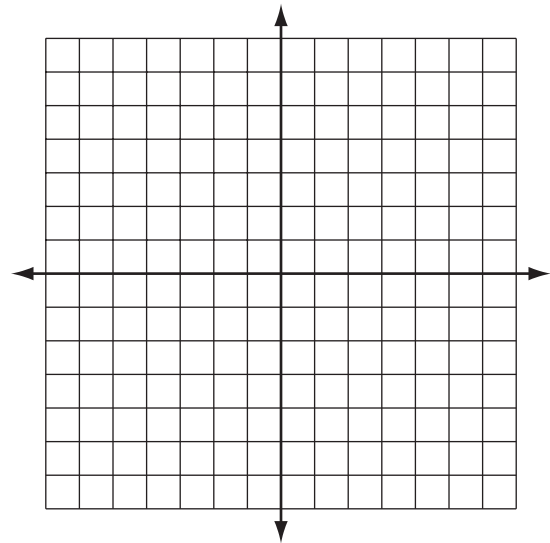
Session 3 (No Calculator)

This test session includes multiple-choice questions and questions for which you must show your work or write out your answer. You may NOT use a calculator during this session.

Mark your answers to questions 44 through 64 in the section marked "Mathematics—Session 3 (No Calculator)" in your Student Response Booklet.

44. Wilma planted a sunflower seed in her garden. If the sunflower grows 3 inches each week, how tall will it be after 14 weeks?
- A. 17 inches
 - B. 32 inches
 - C. 42 inches
 - D. 45 inches

You may use the coordinate grid below to answer question 45.



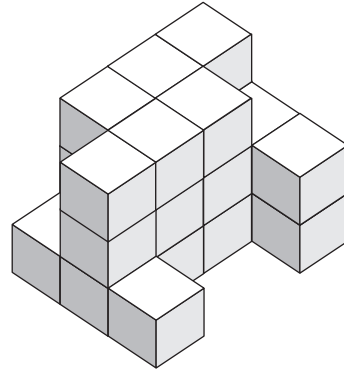
45. Brenda drew a rectangle on a coordinate grid. Two of the corners of her rectangle are located at the points $(-30, -50)$ and $(20, -50)$. If the rectangle is 50 meters by 100 meters, at which point could a third corner of Brenda's rectangle be located on the coordinate grid?
- A. $(20, 0)$
 - B. $(-30, 50)$
 - C. $(70, -50)$
 - D. $(120, 50)$



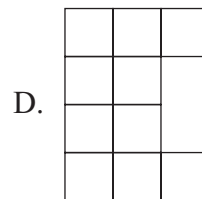
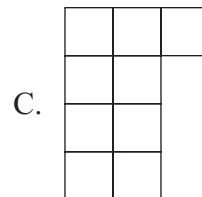
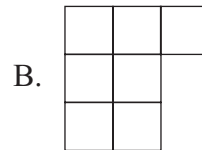
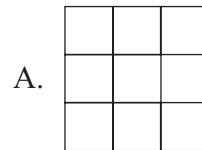
46. Candice got 28 questions correct on a 35-question vocabulary quiz. Which proportion can she use to calculate the percent, P , she got correct?

- A. $\frac{28}{35} = \frac{P}{100}$
 B. $\frac{28}{35} = \frac{100}{P}$
 C. $\frac{28}{100} = \frac{P}{35}$
 D. $\frac{35}{100} = \frac{P}{28}$

47. This three-dimensional structure was constructed out of stacked cubes.



Which picture could show the top view of the structure?



48. Jamie learned that the average distance from Saturn to the Sun is 1,426,980,000 kilometers. How should Jamie write this distance in scientific notation?

A. 1.42698×10^4 km
B. 1.42698×10^6 km
C. 1.42698×10^9 km
D. 1.42698×10^{10} km

49. The Blake family spends 12% of their income on travel. What fraction of their income is spent on travel?

A. $\frac{1}{12}$
B. $\frac{3}{25}$
C. $\frac{1}{6}$
D. $\frac{6}{25}$

50. A bag contains red, blue, and green tokens. Don randomly chooses one token from the bag, records the color, and replaces the token before choosing another token. He performs the experiment 100 times. The final tally of his results is shown in the table below.

Don's Experiment

Color of Token	Tally
Red	
Blue	
Green	

Based on Don's data, what is the probability of randomly choosing a red token from the bag?

A. $\frac{4}{25}$
B. $\frac{4}{21}$
C. $\frac{1}{5}$
D. $\frac{1}{4}$



51. Kayla and her friends played a game. Their scores are shown below.

23 37 41 20 43 21 32 25 20 40 41 34 41 37

Which stem-and-leaf graph correctly represents their scores?

A.

2	0 1 3 5
3	2 4 7
4	0 1 3

B.

2	0 0 1 3 5
3	2 4 7 7
4	0 1 1 1 3

C.

20	0 1 3 5
30	2 4 7
40	0 1 3

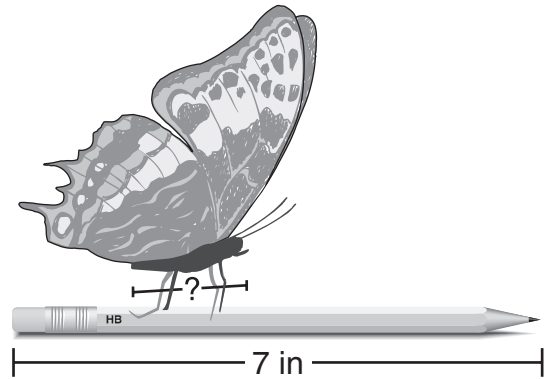
D.

20	0 0 1 3 5
30	2 4 7 7
40	0 1 1 1 3

52. A quadrilateral has sides with the lengths $\sqrt{6}$ cm, π cm, 3^2 cm, and 3.2 cm. What is the length of the longest side?

- A. $\sqrt{6}$ cm
B. π cm
C. 3^2 cm
D. 3.2 cm

53. The figure below shows a butterfly on a 7-inch-long pencil.



Which is the **best** estimate of the length of the butterfly's body?

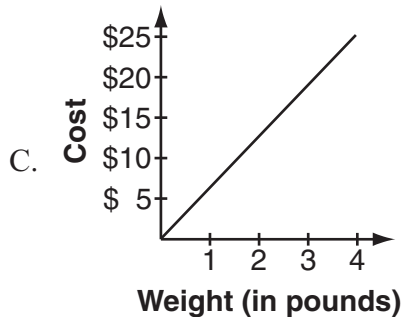
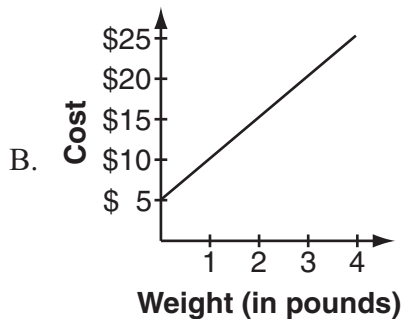
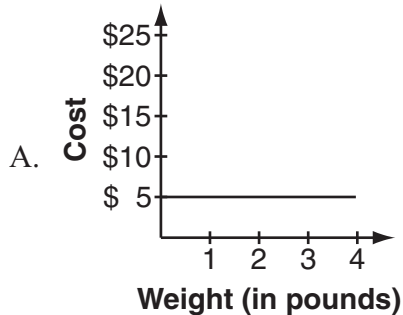
- A. $\frac{1}{2}$ inch
B. $1\frac{1}{2}$ inches
C. $2\frac{1}{2}$ inches
D. $3\frac{1}{2}$ inches



54. The table below shows the costs of different weights of fudge at the Sweet Shop.

Weight	Cost
1 pound	\$ 5
2 pounds	\$10
3 pounds	\$15
4 pounds	\$20

Which graph **best** shows the relationship between the fudge's weight and its cost?



55. A right triangular prism has which of the following?

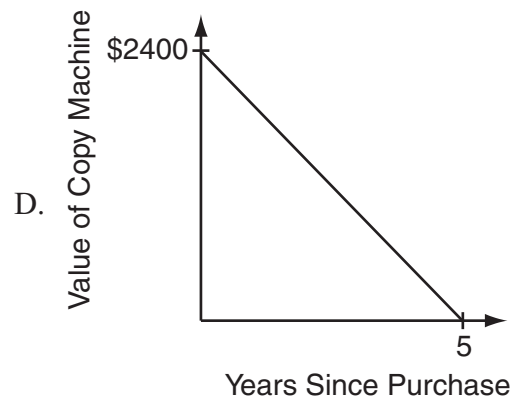
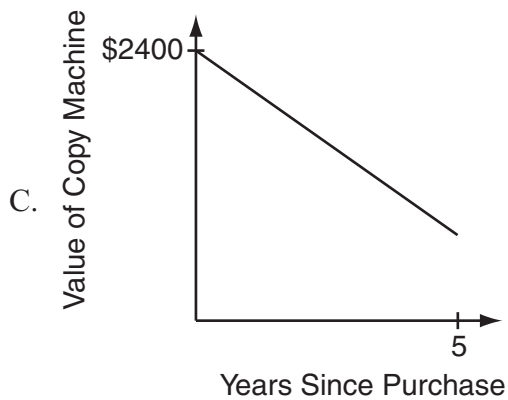
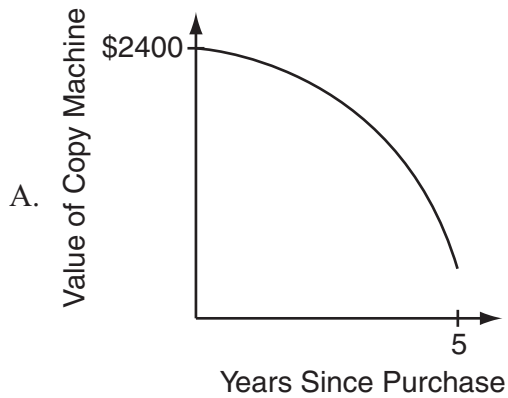
- A. exactly one rectangular face
- B. exactly three rectangular faces
- C. exactly three triangular faces
- D. exactly four triangular faces

56. Bananas are on sale for \$0.29 per pound. Tracy chose 2 bunches of them. One bunch weighs 1.8 pounds and the other weighs 2.2 pounds. Which expression could she use to calculate the total cost of buying the bananas?

- A. $0.29(1.8 + 2.2)$
- B. $0.29(1.8 \cdot 2.2)$
- C. $0.29 + (1.8 + 2.2)$
- D. $0.29 + (1.8 \cdot 2.2)$



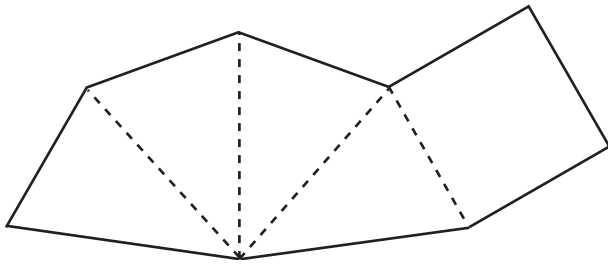
57. A company purchased a copy machine for \$2400. The copy machine will decrease in value at a rate of \$480 each year. Which graph **best** represents the value of the copy machine during the first five years after it is purchased?



58. Teresa burns 450 calories per hour when she plays racquetball. What is the best estimate of the number of calories she burns playing racquetball for 22 minutes?

- A. 100
- B. 150
- C. 225
- D. 275

59. Jonathon cut out the pattern shown below and folded it along the dotted lines to make a three-dimensional figure.



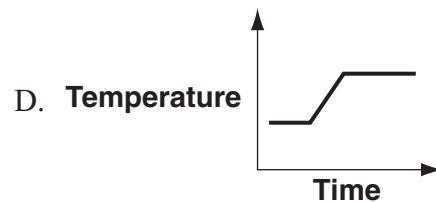
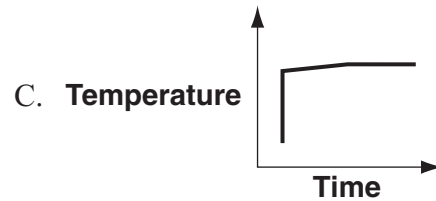
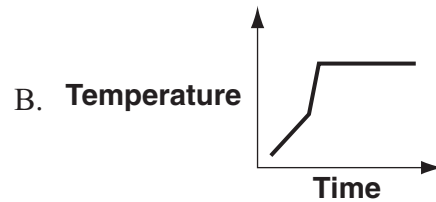
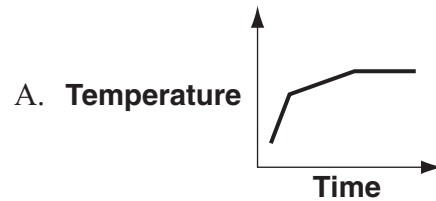
Which three-dimensional figure did he make?

- A. a square prism
- B. a square pyramid
- C. a triangular prism
- D. a triangular pyramid

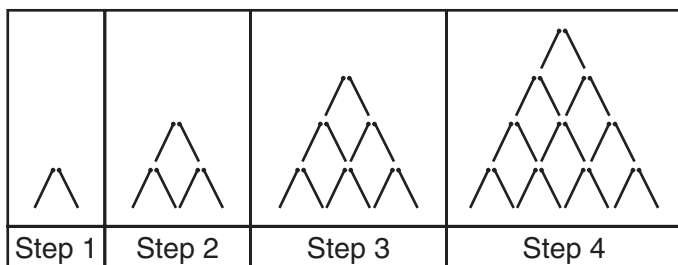
60. Nina took these notes on how to perform a science experiment.

- Heat the substance so that it reaches 100°F quickly.
- Reduce the heat so that the substance's temperature slowly increases to 150°F .
- Further reduce the heat to maintain the temperature at 150°F .

Which graph **best** represents the desired temperature changes?



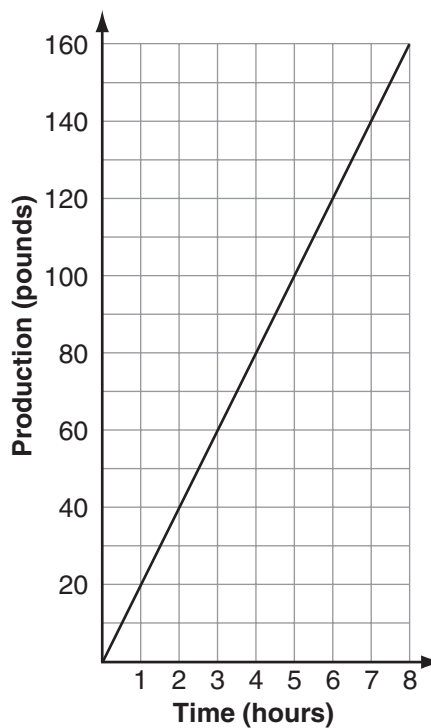
61. Kevin is making a pattern out of matchsticks. The first four steps of his pattern are shown below.



How many matchsticks does Kevin need for Step 6?

- A. 30
- B. 32
- C. 40
- D. 42

62. The graph below shows the production of one machine at a candy factory during an eight-hour day.



Which equation shows the relationship between production, P , and time, t , shown in the graph?

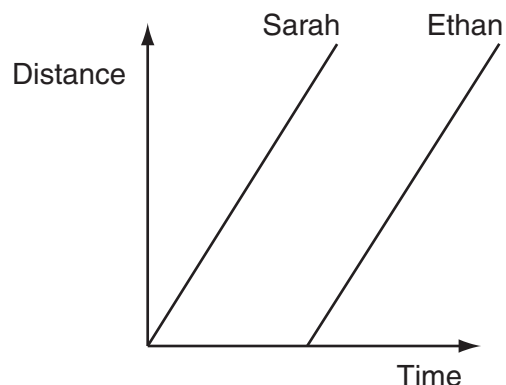
- A. $P = 2t$
- B. $P = 20t$
- C. $P = 2 + t$
- D. $P = 20 + t$



63. Mr. Jackson pays \$650 rent each month to live in his apartment. For each day his rent check is late, he must pay an extra \$5. Which expression represents the amount of money Mr. Jackson would need to pay if his rent check was x days late?

- A. $5x$
- B. $650 + 5x$
- C. $650x + 5$
- D. $650 + 5 + x$

64. Sarah and her brother Ethan walk to school every morning but not always together. The graph below shows the distance each child walked from their house over time Monday morning.



Which sentence **best** describes the situation represented by the graph?

- A. Sarah and Ethan walked at the same rate, but Ethan left later than Sarah did.
- B. Sarah and Ethan walked at the same rate, but Sarah left later than Ethan did.
- C. Sarah and Ethan left at the same time, but Sarah walked faster than Ethan did.
- D. Sarah and Ethan left at the same time, but Ethan walked faster than Sarah did.



Write your answers to questions 65 through 67 in the spaces provided in your Student Response Booklet. Show all of your work.

65. Solve for x :

$$35x + 70 = 280$$

66. If $x = 6$ and $y = \frac{1}{3}$, what is the value of W in the equation $W = 8x^2y$?

67. 18 is 30% of what number?



Write your answer to question 68 in the space provided for it in your Student Response Booklet. Show all of your work.

68. Think of the meaning of the range, median, mean (average), and mode of a list of numbers.
- Make a list of five numbers that have a range of 10 and a median of 8.
 - Make a list of five numbers that have a mode of 7 and a mean of 6.
 - Make a list of five numbers that have a median of 4, a mode of 8, and a mean of 5.

Acknowledgments

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